IN THE CLAIMS:

1. (Currently Amended) A method utilizing a double reporter assay for improving signal-to-background ratio to identify an agent which modulates activity of a target molecule, wherein said target molecule affects cellular propagation, said method comprising the steps of:

a] contacting a cell with a candidate compound, wherein said cell comprises said target molecule, and wherein said cell further comprises a growth marker reporter gene and a gene coding for enzyme whose activity is detectable on the basis of conversion of a substrate;

b] adding said substrate and a substance capable of permeabilizing the membrane of said cell with a delay after said contacting step a];

c] measuring cell propagation; and

d] measuring activity of said reporter genes,

wherein said target molecule affects the activity of said reporter genes.

2. (Canceled)

3. (Original) The method of claim 1, wherein said target molecule is a heterologous molecule.

4. (Previously Presented) The method of claim 3, wherein said heterologous molecule target is selected from the group consisting of: an oligonucleotide, a polynucleotide, a nucleic acid, a polypeptide, a protein, and a protein fragment.

5-6. (Canceled)

7. (Previously Presented) The method of claim 1, wherein said delay comprises the duration of at least one reproductive cycle of said cell.

8. (Original) The method of claim 7, wherein said delay comprises the duration of at least two reproductive cycles of said cell.

9. (Original) The method of claim 7, wherein said delay comprises the duration of no more than twenty-four reproductive cycles of said cell.

10. (Previously Presented) The method of claim 1, wherein said reporter gene activity measuring step c] comprises the step of disrupting said cell.

11. (Canceled)

12. (Previously Presented) The method of claim 1, wherein said target molecule affects cellular propagation directly.

13. (Previously presented) The method of claim 1, wherein said target molecule affects

cellular propagation indirectly.

14-15 (Canceled)

16. (Original) The method of claim 1, wherein said cell is a yeast cell.

17. (Original) The method of claim 16, wherein said yeast cell is a *S. cerevisiae* cell.

18. (Currently Amended) A method of identifying an agent which modulates the activity of at least one target molecule, wherein said at least one target molecule affects cellular propagation, said method comprising the steps of:

(a) contacting a first cell with a candidate compound, wherein said first cell comprises a first target molecule, and wherein said cell further comprises a growth marker reporter gene and a gene coding for enzyme whose activity is detectable on the basis of conversion of a substrate;

(b) contacting a second cell with a candidate compound, wherein said second cell comprises a second target molecule, and wherein said cell further comprises a growth marker reporter gene and a gene coding for enzyme whose activity is detectable on the basis of conversion of a substrate;

(c) adding said substrate and a substance capable of permeabilizing the membrane of said cell with a delay after said contacting steps (a) and (b);

(d) measuring cell propagation of said first cell;

(e) measuring cell propagation of said second cell;

(f) measuring activity of said reporter genes in said first cell; and

(h) measuring activity of said reporter genes in said second cell,

wherein said at least one target molecule affects the activity of said reporter genes.

19. (Previously presented) The method of claim 1, wherein said enzyme is selected from the group consisting of b-galactosidase, b-glucuronidase, luciferease, alkaline phosphastase and acidic phosphatase.

20. (Previously presented) The method of claim 1, wherein said fluorescent protein is selected from the group consisting of GFP, BFP and aequorin.